WHAT IS CLAIMED IS:

1. A system, comprising:

a node including an active device, an interface, a memory, and an address network coupling the active device, the interface, and the memory;

an inter-node network configured to communicate coherency messages between the node and an additional node, wherein the additional node is configured to send on the inter-node network a coherency message requesting an access right to a coherency unit;

wherein the interface is configured to receive the coherency message via the inter-node network and to responsively send a proxy address packet on the address network;

wherein in response to receiving the proxy address packet, the memory is configured to:

provide the interface with data corresponding to the coherency unit and an indication of a global access state of the coherency unit in the node if the global access state is not a modified state; and

send an additional proxy address packet on the address network if the global access state is the modified state.

2. The system of claim 1, wherein if the active device is an owner of the coherency unit, the active device is configured to ignore the proxy address packet and to respond to the additional proxy address packet.

3. The system of claim 1, wherein the additional node includes an additional active device, an additional interface, and an additional address network configured to convey address packets between the additional active device and the additional interface.

4. The system of claim 3, wherein the coherency message requests a write access right to the coherency unit, wherein the proxy address packet is a proxy read-to-own packet.

5. The system of claim 4, wherein the additional proxy address packet is a proxy read-to-own-modified packet.

6. The system of claim 5, wherein if the active device is the owner of the coherency unit, the active device is configured to transition an ownership responsibility for the coherency unit upon receipt of the proxy read-to-own-modified packet and to send data corresponding to the coherency unit to the interface in response to receipt of the proxy-read-to-own-modified packet, wherein the active device transitions an access right to the coherency unit upon sending the data.

7. The system of claim 3, wherein the node is a home node for the coherency unit.

8. A node for use in a multi-node system, the node comprising:

a plurality of devices including a memory, an active device, and an interface configured to send and receive coherency messages on an inter-node network coupling nodes in the multi-node system;

an address network configured to communicate address packets between the plurality of devices;

wherein in response to receiving a coherency message on the inter-node network requesting an access right to a coherency unit, the interface is configured to send a proxy address packet on the address network;

wherein in response to the proxy address packet, the memory is configured to provide the interface with data corresponding to the coherency unit and an indication of a global access state of the coherency unit in the node if the global access state is not a modified state and to send an additional proxy address packet on the address network if the global access state is the modified state.

9. The node of claim 8, wherein in response to the proxy address packet, the memory is configured to update the global access state of the coherency unit in the node.

10. The node of claim 8, wherein the coherency message requests a write access right to the coherency unit, wherein the proxy address packet is a proxy read-to-own packet.

11. The node of claim 10, wherein the additional proxy address packet is a proxy read-to-own-modified address packet.

12. The node of claim 11, wherein if the active device is the owner of the coherency unit, the active device is configured to transition an ownership responsibility for the first coherency unit upon receipt of the proxy read-to-own-modified packet and to send data corresponding to the coherency unit to the interface in response to receipt of the proxy read-to-own-modified packet, wherein the active device transitions an access right to the coherency unit upon sending the data.

13. The node of claim 8, wherein if the active device is the owner of the coherency unit, the active device is configured to ignore the proxy address packet and respond to the additional proxy address packet.

14. The node of claim 13, wherein the interface includes a global access state cache indicating global access states of a plurality of recently accessed coherency units in the node, wherein the interface is configured to check the global access state cache for the global access state of the coherency unit in the node, wherein if the global access state is not included in the global access state cache, the interface is configured to send the proxy address packet to the memory.

15. The node of claim 14, wherein in response to receiving an additional coherency message requesting an access right to an additional coherency unit, the interface is configured to check the global access state cache for a global access state of the additional coherency unit;

wherein if the global access state of the additional coherency unit is the modified state, the interface is configured to send on the address network an other proxy address packet of a same type of proxy address packet as the additional proxy address packet;

wherein if the active device is an owner of the additional coherency unit, the active device is configured to respond to the other proxy address packet.

16. A method for use in a multi-node system, wherein the multi-node system includes a node and an additional node coupled by an inter-node network configured to transmit coherency messages between the node and the additional node, the method comprising:

an interface included in the node receiving a coherency message on the inter-node network from the additional node, wherein the coherency message requests an access right to a coherency unit;

in response to said receiving, the interface sending a proxy packet on an address network included in the node;

in response to receiving the proxy packet from the address network, a memory included in the node:

providing the interface with data corresponding to the coherency unit and an indication of a global access state of the coherency unit within the node if the global access state is not a modified state; and

sending an additional proxy packet on the address network if the global access state is the modified state.

17. The method of claim 16, further comprising an active device included in the node ignoring the proxy packet and responding to the additional proxy packet, wherein the active device is an owner of the coherency unit.

18. The method of claim 17, wherein the coherency message requests a write access right to the coherency unit, wherein the proxy packet is a proxy read-to-own packet.

19. The method of claim 18, wherein the additional proxy address packet is a proxy read-to-own-modified packet.

20. The method of claim 19, further comprising the active device transitioning an ownership responsibility for the coherency unit upon receipt of the proxy-read-to-own-modified packet, sending data corresponding to the first coherency unit to the interface in response to receipt of the proxy-read-to-own-modified packet, and transitioning an access right to the coherency unit upon sending the data.

21. A system, comprising:

means for communicating coherency messages between a plurality of nodes;

a node of the plurality of nodes, wherein the node includes a plurality of devices and means for communicating address packets between the plurality of devices, wherein the plurality of devices includes an active device, a memory, and a means for sending and receiving coherency messages on the means for communicating coherency messages;

an additional node of the plurality of nodes, wherein the additional node is configured to send a coherency message requesting an access right to a coherency unit on the means for communicating coherency messages;

wherein in response to receiving the coherency message via the means for communicating coherency messages, the means for sending and receiving coherency messages is configured to send a proxy address packet to the memory on the means for communicating address packets;

wherein the memory is configured to respond to the proxy address packet by:

sending the means for sending and receiving coherency messages data corresponding to the coherency unit and an indication of the maximum allowable access right of the plurality of devices to the coherency unit if the maximum allowable access right is not write access; and

sending an additional proxy address packet on the means for communicating address packets if the maximum allowable access right is write access.

22. A system, comprising:

a node including a plurality of devices and an address network configured to convey address packets between the plurality of devices, wherein the plurality of devices includes an active device, a memory subsystem, and an interface to an inter-node network;

an additional node coupled to send the node a coherency message requesting an access right to a coherency unit via the inter-node network;

wherein in response to receiving the coherency message via the inter-node network, the interface is configured to send one of a plurality of types of proxy address packet on the address network dependent on a global access state of the coherency unit in the node, wherein if the interface does not have an indication of the global access state of the coherency unit in the node, the interface is configured to speculatively send a type of proxy address packet associated with a shared global access state;

wherein if the active device is an owner of the coherency unit, the active device is configured to ignore the type of proxy address packet;

wherein in response to the type of proxy address packet, the memory subsystem is configured to send a different type of proxy address packet on the address network if the global access state of the coherency unit is a modified global access state.

23. The system of claim 22, wherein the coherency message requests a read access right to the first coherency unit, wherein the type of proxy address packet is a proxy memory read packet.

24. The system of claim 23, wherein if the global access state of the coherency unit in the node is a modified state, the memory subsystem is configured to responsively send a proxy read-to-share-modified address packet on the address network.

25. The system of claim 24, wherein if the active device is the owner of the coherency unit, the active device is configured to send data corresponding to the coherency unit to the interface in response to receipt of the proxy-read-to-share-modified packet.

26. The system of claim 25, wherein if the active device is the owner of the coherency unit, the active device is configured to transition an ownership responsibility for the coherency unit upon receipt of the proxy read-to-share-modified packet.

27. The system of claim 22, wherein the coherency message requests a write access right to the coherency unit, wherein the type of proxy address packet is a proxy read-to-own packet.

28. The system of claim 27, wherein the plurality of devices includes an other active device, wherein if the other active device has a read access right to the coherency unit, the other active device is configured to transition the read access right to an invalid access right upon receipt of the proxy read-to-own packet.

29. The system of claim 28, wherein if the global access state of the coherency unit in the node is a modified global access state, the memory subsystem is configured to responsively send a proxy read-to-own-modified address packet on the address network.

30. The system of claim 29, wherein if the active device is the owner of the coherency unit, the active device is configured to transition an ownership responsibility for the coherency unit upon receipt of the proxy read-to-own-modified packet and to send data corresponding to the coherency unit to the interface in response to receipt of the proxy-

read-to-own-modified packet, wherein the active device transitions an access right to the coherency unit upon sending the data.